



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/538,413	06/10/2005	Helmut Rupp	2004P84076WOUS	3589
28524 7590 05/22/2007 SIEMENS CORPORATION INTELLECTUAL PROPERTY DEPARTMENT 170 WOOD AVENUE SOUTH ISELIN, NJ 08830			EXAMINER LEE, GILBERT Y	
			ART UNIT 3673	PAPER NUMBER
			MAIL DATE 05/22/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/538,413	Applicant(s) RUPP ET AL.	
	Examiner Gilbert Y. Lee	Art Unit 3673	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 February 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-21, 23 and 24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-21, 23 and 24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input checked="" type="checkbox"/> Other: <u>Examiner's Attachment C</u> |

DETAILED ACTION

1. The amendment filed 2/26/07 has been entered.

Claim Objections

2. Claim 15 is objected to because of the following informalities: "an" should be deleted in 6. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 15 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 15, the phrase "a like-formed" renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

Art Unit: 3673

the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Note for reference characters A-M and R-T refer to the Examiner's Attachment C and for reference character Z refer to the Examiner's Attachment B filed in office action dated 20061130.

4. Claims 12-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walter et al. (US Patent No. 3,773,336) in view of Langston et al. (US Patent No. 6,623,238).

Regarding claim 12, the Walter et al. reference discloses a seal (Fig. 6) sealing a gap between a rotor (e.g. 17) and a stator (e.g. 15), comprising:

a ring (e.g. 28-31) and at least two annular ring carriers (e.g. A-E) extending in the circumferential direction of the rotor (Fig. 6), each ring being fixed between a first end face (F) of a first brush carrier (e.g. A) and a second end face (G) of a second ring carrier (e.g. B), and the second ring carrier being directly fixed axially and radially to the first ring carrier (Fig. 6),

wherein the second ring carrier is fixed to the first ring carrier by an unreleasable snap connection (Fig. 6), including the ring being a lip ring (Fig. 6).

However, the Walter et al. reference fails to disclose the ring being a brush ring with a plurality of bristles.

The Langston et al. reference, a seal for a rotatable member, discloses that a brush seal can replace a lip seal (Col. 5, Lines 10-15).

It would have been obvious to one of ordinary skill in the art at the time of the invention to provide a brush seal in place of a lip seal to the Walter et al. reference in

Art Unit: 3673

view of the teachings of the Langston et al. reference in order to cause the exit fluid flow to be less modulated than the entering fluid flow.

Regarding claim 13, the Walter et al. reference, as modified in claim 12, discloses a slot (H) being formed between the first brush ring carrier and the second brush ring carrier and the slot receiving the brush ring (Walter et al., Fig. 6), wherein the snap connection is formed between the circumferential slot and the latching nose (Walter et al., Fig. 6).

Regarding claim 14, the Walter et al. reference, as modified in claim 12, discloses at least one brush ring carrier (B) having on its first end face (I) a shoulder with a circumferential slot (K) and at least one second brush ring carrier (C) having on its second end face (e.g. face of element C in contact with I) a continuous projection (I), with a latching nose (e.g. portion of element C latched to element J), and the projection and the latching nose of the second brush ring carrier cooperating with the shoulder and with the circumferential slot of an adjacently arranged first brush ring carrier (Fig. 6).

Regarding claim 15, the Walter et al. reference, as modified in claim 12, discloses the second brush ring carrier (C) having on its first end face (S) a shoulder with a circumferential slot (R) on its second end face (e.g. face of element C in contact with I) a continuous projection (L), with a latching nose (e.g. portion of element C latched to element J), and the projection and the latching nose of the second face of the at least one brush ring carrier cooperating with the shoulder and with the circumferential slot of an adjacently arranged brush ring carrier (Fig. 6).

Regarding claim 16, the Walter et al. reference, as modified in claim 12, discloses one brush ring carrier being held at least indirectly on the stator (Fig. 6).

Regarding claim 17, the Walter et al. reference, as modified in claim 14 and as best understood, a plurality of brush ring carriers (e.g. B-E) adapted for sequential installation onto a stator (Walter et al., Fig. 6), wherein the circumferential slot of one of the plurality of the brush ring carriers is disposed to receive the latching nose of an adjacently arranged brush ring carrier (Walter et al., Fig. 6).

Regarding claim 18, the Walter et al. reference, as modified in claim 12 and as best understood, discloses the brush ring carriers having a support plate (e.g. Langston et al., T) and the brush rings bearing axially against the support plate (Langston et al., Fig. 7D).

Regarding claim 19, the Walter et al. reference, as modified in claim 12, discloses the brush ring carriers having a protective ring (e.g. Langston et al., Z).

Regarding claim 20, the Walter et al. reference, as modified in claim 12 and as best understood, discloses a support plate (Z), wherein the protective ring being radially elastic (Langston et al., Fig. 7D).

Regarding claim 21, the Walter et al. reference, as modified in claim 12, discloses the brush seal being a radial seal (Walter et al., Fig. 6).

Regarding claims 23 and 24, the Walter et al. reference, as modified in claims 14 and 17 and as best understood, discloses the circumferential slot being formed disposed toward an outside diameter of the at least one first brush ring carrier (Walter et al., Fig. 6).

Response to Arguments

5. Applicant's arguments filed 2/26/07 have been fully considered but they are not persuasive.

With regards to the applicant's argument of claim 12, the applicant is directed to the above rejection. The examiner would also like to note that the definition of "snap-on", as defined by *Random House Unabridged Dictionary*, is attached or fitting into place by means of a snap or with a pressing motion: *snap-on bottle tops*.

With regards to the applicant's argument of the combination of Walter et al. and Langston et al., the argument is not persuasive because as stated in the previous office action and as stated above, the motivation to combine the references would be to "cause the exit fluid flow to be less modulated than the entering fluid flow."

With regards to the applicant's argument of the Walter et al. reference being used for the propeller shafts of ships, the argument is not persuasive because the propeller of the shaft is merely intended use. The reference clearly discloses a **seal** for rotatable members, as is the current application.

With regards to the applicant's argument of a slot, the argument is not persuasive because a slot does not need three boundaries as the applicant is alleging. Clearly the boundaries of the slot is the upper surface of J and the surface I, which ultimately make a groove that opens upwards and as well as to the right.

With regards to the applicant's argument of a latching nose, the argument is not persuasive because the definition of a latch, as defined by *WordNet® 3.0*, is 2. catch for

fastening a door or gate; a bar that can be lowered or slid into a groove. Therefore the latching nose would only have to be considered as a bar, which element L is clearly shown as in Figure 6 of the Walter et al. reference.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

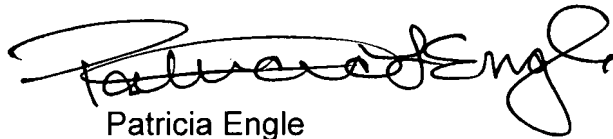
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gilbert Y. Lee whose telephone number is 571-272-5894. The examiner can normally be reached on 8:00 - 4:30, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patricia L. Engle can be reached on (571)272-6660. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3673

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

GL
May 13, 2007

A handwritten signature in black ink, appearing to read 'Patricia Engle', with a stylized flourish at the end.

Patricia Engle
Supervisory Examiner
Tech. Center 3600

EXAMINER'S ATTACHMENT C

PATENTED NOV 20 1973

3,773,336

SHEET 6 OF 6

